

# Montgomery County **RAPID TRANSIT**

BRT CORRIDOR STUDIES



# What is Bus Rapid Transit (BRT)?

## LRT on Rubber Tires

- Modern, low floor vehicles
- Multiple door entry
- Advanced fare payment
- Varied runningways
- Stations
- Signal priority/preemption
- Real-time transit info
- High frequency service
- Operates on intervals, not a timetable
- Branded – recognizable and distinct



# Why RTS ? Why BRT ?

## ■ RTS - Improved, accessible, cost-effective transit service

- Improve bus transit operations
- Provide an environmentally prudent and sustainable transportation alternative
- Improve accessibility to employment and services for transit dependent populations
- Support planned transit-oriented development and redevelopment opportunities

## ■ Bus Rapid Transit (BRT)

- Uses our rights-of-way more efficiently (maximizes person throughput)
- Flexibility
- Reliability
- Ability to attract “choice” riders
- Cost effective



# Countywide Transit Corridors Functional Master plan

## What it does:

- Recommends implementing a 102-mile bus rapid transit (BRT) network comprising 10 corridors and the Corridors Cities Transitway
- Recommendation to create dedicated lanes for bus transit along certain segments
- Recommends locations of proposed stations
- Establishes public rights-of-way to implement the BRT network

## What it doesn't do:

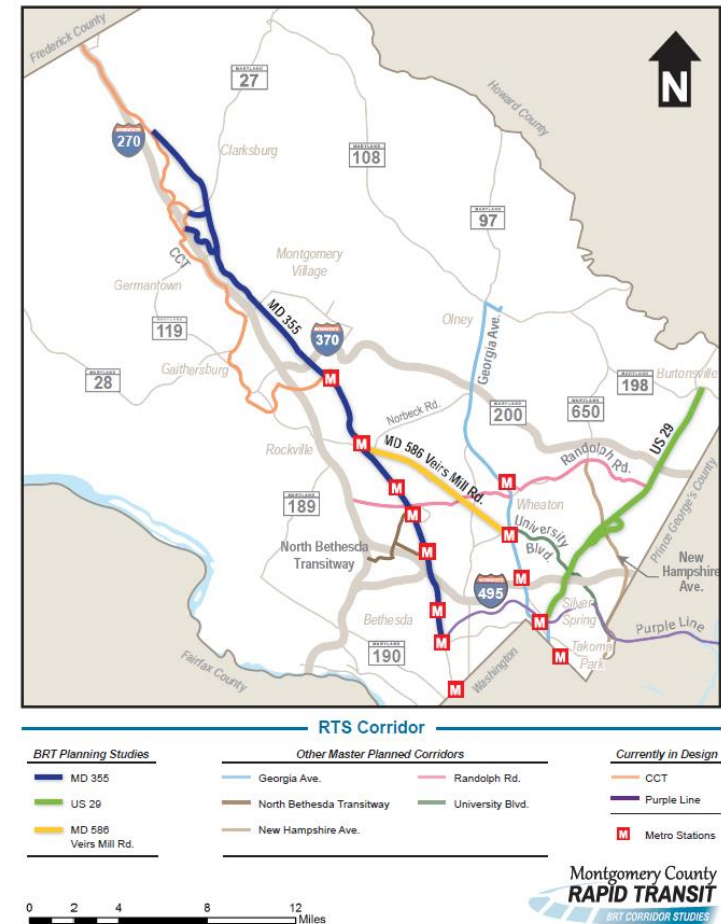
- Does not endorse specific “treatments” to determine whether:
  - A dedicated lane should be in the median or on the curb
  - Right-of-way could accommodate bi-directional BRT, or if single reversible lane could achieve the same objective
  - Dedicated lanes achieved by repurposing are warranted (requires further detailed traffic analysis and ridership forecasts)
- Does not recommend staging or phasing to implement the BRT corridors

**This master plan is no different from other road projects recommended in master plans for which alternatives are reviewed and subject to considerable community feedback**



# Process & Progress

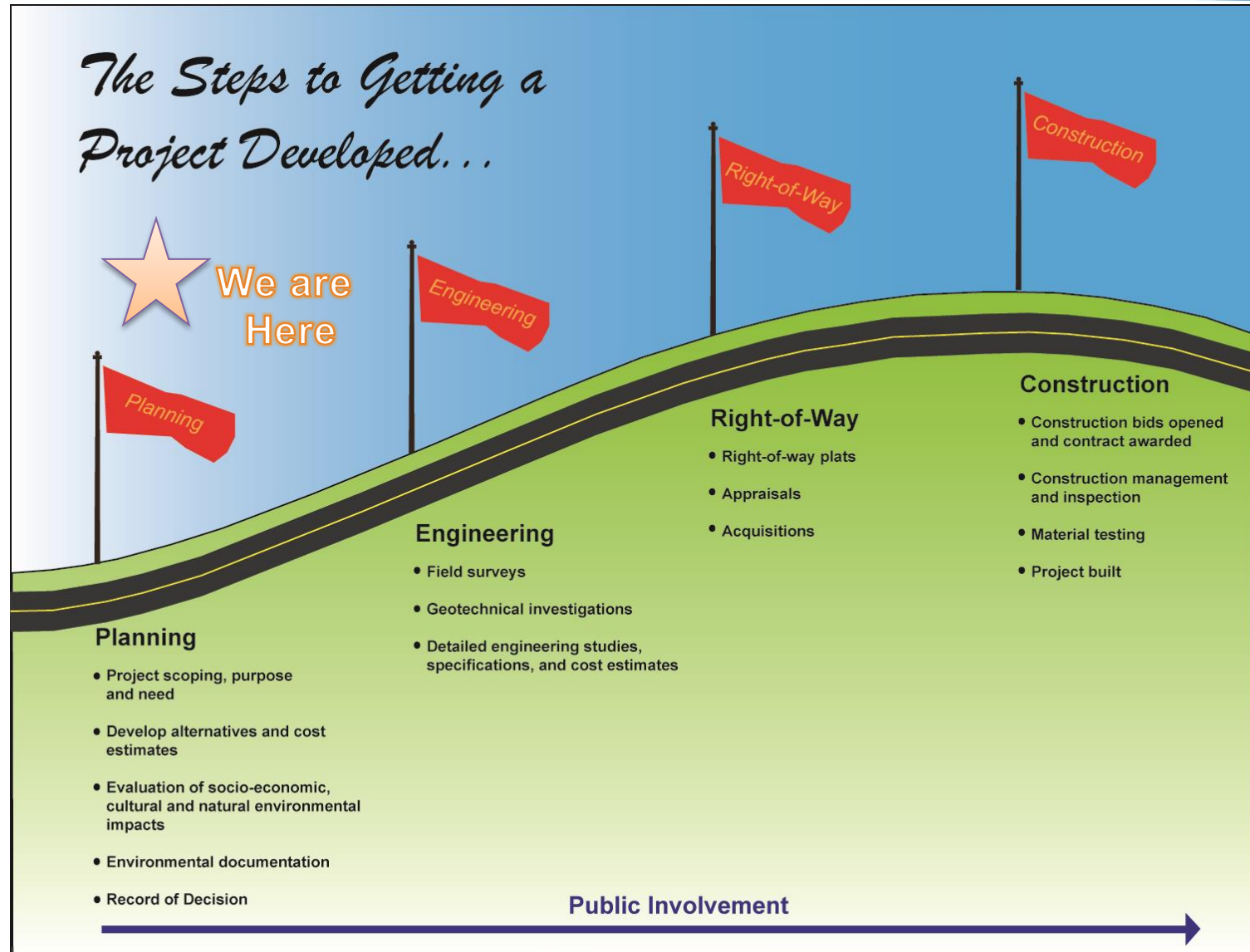
- The Master Plan recommends 10 BRT corridors; the initial priority is to conduct three (3) corridor studies:
  - MD 355 (both North and South segments)
  - US 29
  - MD 586 (Veirs Mill Road)



# BRT Corridors

Corridor	Corridor Size (directional miles)	# of Stations
<b>MD 355 North</b>	<b>14.1</b>	<b>20</b>
<b>MD 355 South</b>	<b>9.3</b>	<b>14</b>
<b>US 29</b>	<b>11.0</b>	<b>11</b>
<b>Veirs Mill Road</b>	<b>6.2</b>	<b>11</b>
<b>New Hampshire Avenue</b>	<b>8.5</b>	<b>12</b>
<b>Randolph Road</b>	<b>10.1</b>	<b>11</b>
<b>University Boulevard</b>	<b>5.5</b>	<b>9</b>
<b>North Bethesda Transitway</b>	<b>2.7</b>	<b>7</b>
<b>Georgia Ave North</b>	<b>9.5</b>	<b>13</b>
<b>Georgia Ave. South</b>	<b>3.7</b>	<b>8</b>

Source: Montgomery County Countywide Transit Corridor Functional Master Plan



# Corridor Advisory Committees (CACs)

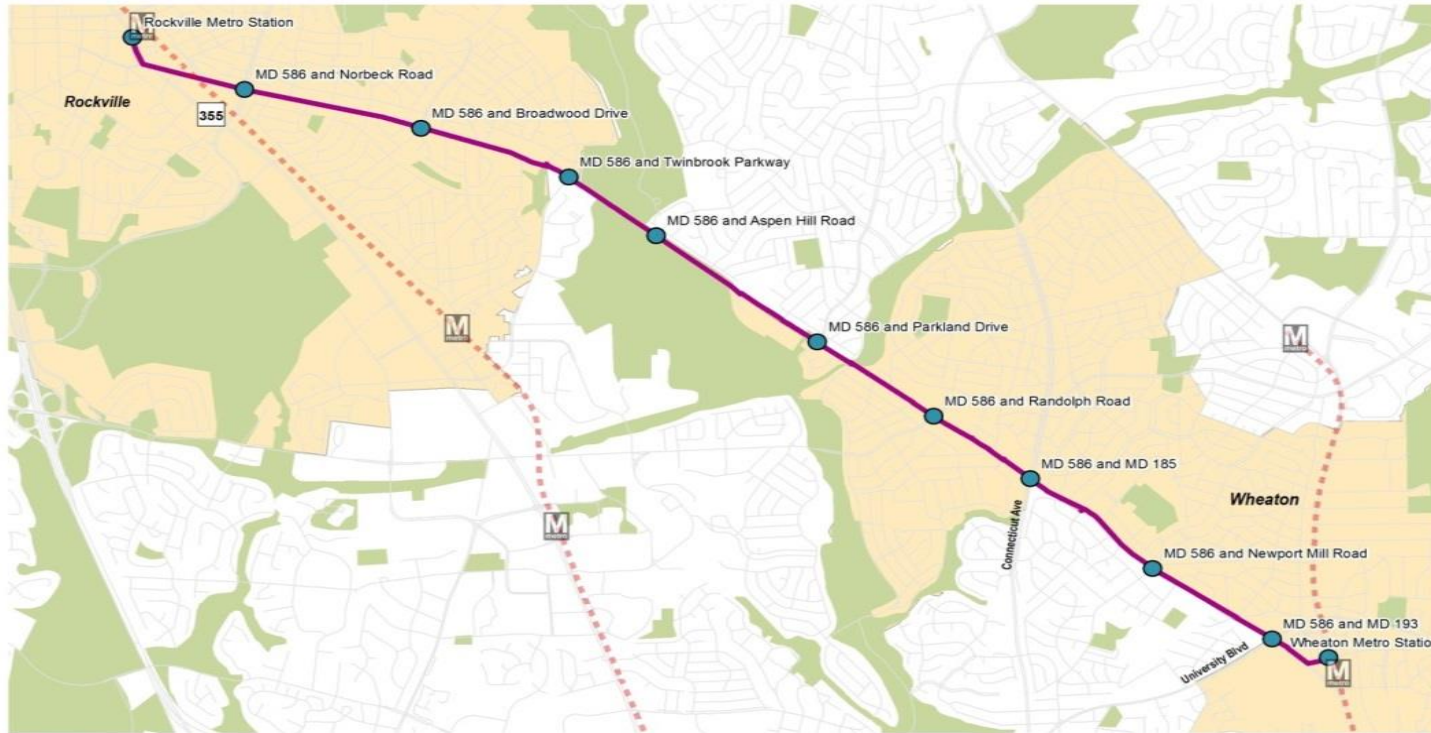
- Approximately 150 total CAC members
- CACs meet regularly with the project team to review information, ask questions and provide feedback.
- Feedback is reviewed by the project team and meeting summaries are published on the project website.
- CACs are **advisory committees** and not decision-making committees.
- Part of a broader community engagement process.





# MD 586 (Veirs Mill Road) BRT Corridor Planning Study

# Veirs Mill Rd. (MD 586) BRT Corridor Planning Study



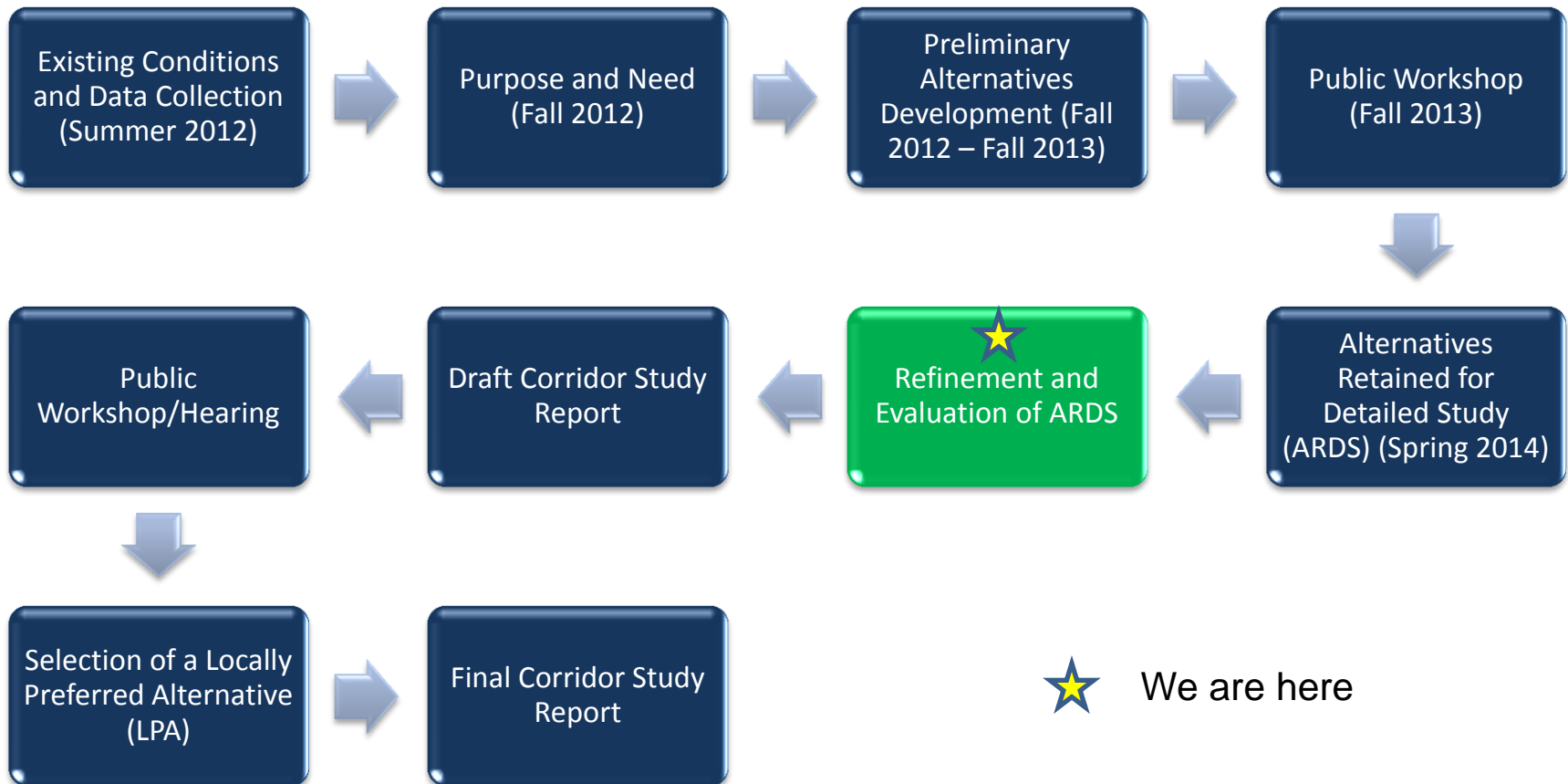
## RTS Corridor

- Veirs Mill Rd Stations
- M Metrorail Station
- Roadways
- Veirs Mill Rd
- - - Metrorail Red Line

0 0.5 1 2 Miles

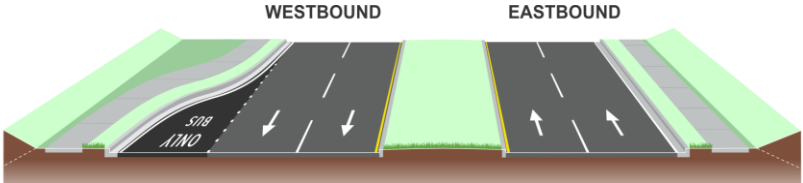
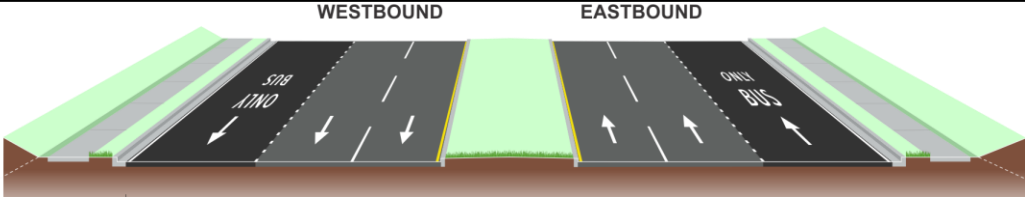
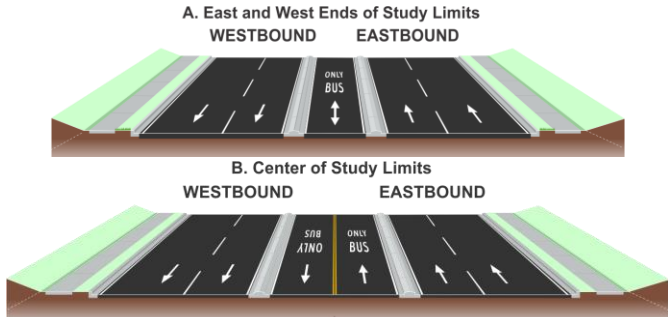


# Project History



We are here

# Alternatives Retained for Detailed Study (ARDS)

<b><u>Alternative 1:</u></b> No-Build	
<b><u>Alternative 2:</u></b> Enhanced bus service with queue jumps	
<b><u>Alternative 3:</u></b> New BRT service in dedicated curb lanes and mixed traffic	
<b><u>Alternative 5B:</u></b> New BRT service in bi-directional median lane (or two median lanes where feasible)	



# Refinement and Evaluation of ARDS

- Detailed Engineering
  - Develop alignments
  - Stormwater management analysis
  - Utility investigation
  - Cost estimates
  - Quantify property impacts
- Environmental studies
  - Natural environmental
  - Hazardous materials
  - Community
  - Indirect and cumulative effects
  - Air and noise analysis
- Traffic analysis
- Ridership forecasts



# Project Schedule

- Draft Corridor Study Report: May 2016
- Public Workshop/Hearing: June 2016
- Selection of a Locally Preferred Alternative: August 2016
- Final Corridor Study Report: December 2016

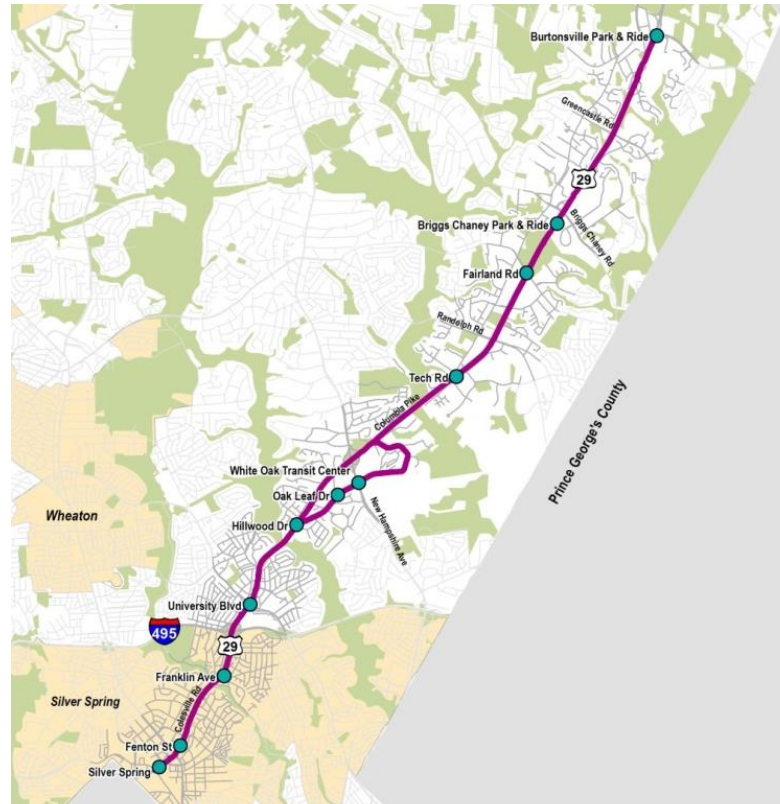
# MD 586 – Public Outreach

- Purpose and Need Open House – May 2012
- Alternatives Public Workshop – November 2013
- Corridor Advisory Committee (CAC)
  - Conducted four CAC Meetings:
    - Meeting #1 – February 2015
    - Meeting #2 – March 2015
    - Meeting #3 – May 2015
    - Meeting #4 – September 2015
    - Meeting #5 – To be scheduled (Fall 2015)
- Public Workshop/Hearing – June 2016
- Project Website:  
<http://apps.roads.maryland.gov/WebProjectLifeCycle/ProjectInformation.aspx?projectno=MO2441115>

# US 29 BRT Corridor Planning Study



# US 29 BRT Corridor Planning Study



## RTS Corridor

- US 29
- US 29 Stations
- Roadways Within 1/2-Mile of Corridor
- Roadways

0 1 2 4 Miles



# US 29 - Work Performed To Date

## ■ Engineering

- Laid out Master Plan at a conceptual level to assess feasibility of recommendations and potential impacts to property and resources
- Investigated additional conceptual alternatives

## ■ Environmental

- Conducted preliminary environmental inventory of natural, cultural, and socio-economic resources
- Prepared Preliminary Draft Environmental Assessment Form (EAF)

## ■ Traffic

- Completed existing traffic counts
- Completed Existing and Future 2040 No-Build Analysis

## ■ Service Planning

- Began service planning work

## ■ Ridership

- Developed MWCOG model for ridership
- Completed Existing and Future 2040 No-Build Ridership

## ■ Documentation

- Began Preliminary Pre-Purpose and Need
- Began Development of Evaluation Criteria

# US 29 – Next Steps

- **Engineering**
  - Refine and evaluate alternatives
- **Environmental**
  - Evaluate potential environmental impacts resulting from build alternatives
- **Traffic**
  - Complete 2040 Build Analysis of alternatives
  - Conduct traffic operations safety review of alternatives
- **Ridership**
  - Develop MWCOG model for ridership
  - Prepare 2040 Build Ridership
- **Lane Repurposing**
  - Conduct Person Throughput Analysis
- **Service and Station Planning**
  - Complete service planning work and station location refinements
- **Coordination with Howard County BRT planning efforts**
- **Estimates**
  - Develop order-of-magnitude cost estimates
  - Develop right-of-way estimates
- **Documentation**
  - Finalize evaluation criteria
  - Prepare Recommendations Report

# US 29 – Public Outreach

## ■ Corridor Advisory Committee (CAC) – North and South Groups

- Conducted four sets of CAC Meetings:
  - Meeting # 1 - February 2015
  - Meeting # 2 – April 2015
  - Meeting # 3 – June 2015
  - Meeting # 4 – August / September 2015
  - Meeting # 5 – To be Scheduled (Fall 2015)

\*The Project Team is committed to meeting with Community Groups and Elected Officials upon request\*

## ■ Next Public Meetings - Spring 2016

## ■ Project Website

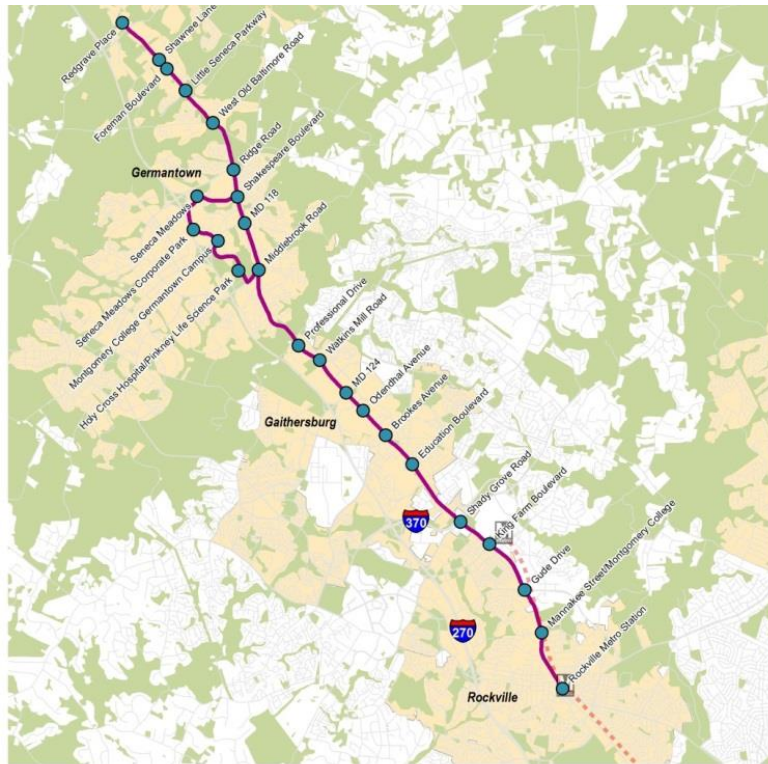
- SHA – [apps.roads.maryland.gov/WebProjectLifeCycle/ProjectHome.aspx](http://apps.roads.maryland.gov/WebProjectLifeCycle/ProjectHome.aspx)



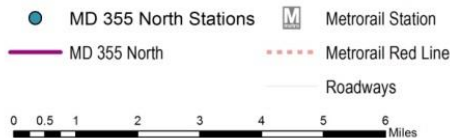


# MD 355 BRT Corridor Planning Study

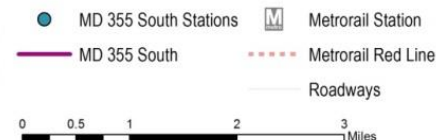
# MD 355 BRT Corridor Planning Study



## RTS Corridor



## RTS Corridor



# MD 355 – Work Performed to Date

## ■ Engineering

- Laid out Master Plan at a conceptual level to assess feasibility of recommendations and impacts
- Investigated additional conceptual alternatives

## ■ Environmental

- Conducted preliminary environmental inventory of natural and socio-economic resources
- Prepared Draft Environmental Assessment Form (EAF)

## ■ Traffic

- Completed existing traffic counts
- Completed Existing and Future 2040 No-Build Operational Analysis

## ■ Service Planning

- Began service planning work

## ■ Ridership

- Developed MWCOG model for ridership
- Developed Existing and Future 2040 No-Build Ridership

## ■ Municipal Engagement

- Coordinated with Rockville and Gaithersburg BRT planning efforts

## ■ Documentation

- Began Preliminary Pre-Purpose and Need
- Began Development of Evaluation Criteria

# MD 355 – Next Steps

## ■ Engineering

- Refine and evaluate alternatives

## ■ Environmental

- Evaluate potential environmental impacts

## ■ Traffic

- Complete 2040 Build Analysis of alternatives
- Conduct traffic operations safety review of alternatives

## ■ Lane Repurposing

- Conduct person throughput analysis

## ■ Ridership

- Complete 2040 Build Ridership for alternatives

## ■ Service and Station Planning

- Complete service planning work and station location refinements

## ■ Public Involvement

- Conduct additional CAC Meetings
- Conduct Public Meetings

## ■ Municipal Engagement

- Continue coordination with Rockville and Gaithersburg BRT planning efforts

## ■ Estimates

- Develop construction and operations cost estimates
- Develop right-of-way cost estimate

## ■ Documentation

- Prepare Corridor Study Report



# MD 355 – Public Involvement

## ■ Corridor Advisory Committee (CAC)

- Conducted four CAC Meetings:
  - Meeting # 1 - February 2015
  - Meeting # 2 – April 2015
  - Meeting # 3 – June 2015
  - Meeting # 4 – August / September 2015
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## ■ Next Public Meetings – Spring 2016

## ■ Project Website

- SHA – [apps.roads.maryland.gov/WebProjectLifeCycle/ProjectHome.aspx](http://apps.roads.maryland.gov/WebProjectLifeCycle/ProjectHome.aspx)



# Montgomery County BRT Projects – Funding Status

Project	Planning	Design	ROW Acquisitions	Construction
CCT – Phase I	\$ 45.8 M	\$ 35 M	\$ 35 M	
MD 355	\$ 6 M <sup>a</sup>			
US 29	\$ 3 M <sup>a</sup>			
MD 586	\$ 6 M			

**\*** = UNFUNDED Phase

**a** = PARTIALLY FUNDED Phase

# Thank you

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